



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/542,908

07/20/2005

Dolf Henricus Jozef Van Casteren

NL 030048

1801

24737

7590

12/31/2007

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

A, MINH D

ART UNIT

PAPER NUMBER

2821

MAIL DATE

DELIVERY MODE

12/31/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/542,908	<b>Applicant(s)</b> VAN CASTEREN, DOLF HENRICUS JOZEF	
	<b>Examiner</b> Minh D. A	<b>Art Unit</b> 2821	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 7/20/05.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3 and 9 is/are rejected.
- 7) ☒ Claim(s) 2, 4-8 and 10-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/15/06</u> . | 6) <input type="checkbox"/> Other: _____  |

***DETAILED ACTION***

1. This is a response to the Applicants' filing on 07/20/05. In virtue of this filing, claims 1-12 are currently presented in the instant application.

***Inventorship***

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

4. The information disclosure statement (IDS) submitted on 3/15/06 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Specification Objection***

5. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

### ***Drawings Accepted***

6. The drawings submitted on 7/20/05 are accepted.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by El-Hamamsy et al (U.S. Patent No: 5, 488. 269).

Regarding claim 1, EL-Hamamsy et al disclose (see attached element devices as show in figures 2), a circuit for driving a load(16), comprising: two input terminals (11,12) for connection to a source of a supply voltage (Vac); a first and a second output terminal (26, 27) for connection to the load (16); at least one inductor (28) coupled between one of the output terminals and a corresponding connection node (15); at least one arrangement (gate drive circuit(80)) comprising a switch (M1)(Q2)coupled between one of said input terminals (11) and one of said connection nodes (15), a diode (D5) being connected between said one connection node(15) and the other input terminal (12); a control unit(20) for controlling said one or more switches (M1, M2)(Q1 and Q2), ( see col.3, lines 53-67 to col.65) ; characterized in that each arrangement (80)(Q1 and Q2) and corresponding diode (D5) are designed to allow the voltage over the opened switch (M1) of said arrangement to return to substantially zero before said switch (M1) is closed, the control unit(20) being designed to provide a signal for closing the switch (M1) when a substantially zero voltage over said opened switch (M1) is detected. See figures 31-3f, col.4, lines 4-67.

Regarding claim 9, EL-Hamamsy et al disclose (see attached element devices as show in figure 2 and comprising the steps of: a gate drive circuit (20) for turning on a switch (M1) for providing current through an inductor (28) to the load(16); and for turning off said switch (M1) when the current through the inductor (28) reaches a determined value; characterized in that after turn-off of the switch (M1) the current is directed so that it continues to flow until the voltage over the switch is substantially zero, at which time the switch (M1) is turned on again. See figures 31-3f, col.4, lines 4-67.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over El-Hamamsy et al (U.S. Patent No: 5, 488. 269) in view of Chang et al (U.S. Patent No: 6,362,575).

Regarding claim 3, EL-Hamamsy et al disclose the characterized in that the switches (M1,M2) as showed in claim 1 or figure 2.

El-Hamamsy et al does not teach that, the switches are MOSFET switches.

Change et al disclose, in figure 2, the switches are MOSFET switches (Q2 and Q3).Col.9, lines 45-49.

It would have been obvious to one having ordinary skill in the art to employ the switches are MOSFET switches disclosed in Change in the discharge lamp of EL-Hamamsy et al in order to provide ON/OFF switches. As disclosed in Change et al, the motivation for the combination would be obtained the Mosfet switches instead another switches such as JET or another type of switches, since the MOSFETS would be easy used for the analog and digital circuit and would be used for controlling a high frequency electronic ballast for operating of the discharge lamp.

***Allowable Subject Matter***

11. Claims 2, 4-8, 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter:

Prior art does not teach that, a first arrangement (80) comprising a first switch (M1) coupled between the first input terminal (ii) and one of the said connection nodes (15), a diode (D1) being connected between said one connection node (15) and the second input terminal (12) ; a second arrangement (81) comprising the second switch (M2) coupled between the second input terminal (12) and one of the said connection nodes (15, 16), a diode (D2) being connected between said one connection node (15,16) and the first input terminal (li) ; the control unit being designed to generate its control signals in commutation intervals (30, 31), said first switch (M1) being operated during a first interval (30) causing a load current having substantially a first direction,

and said second switch (M2) being operated during a second interval (31) causing a load current having substantially the opposite direction recited in dependent claim 2.

Prior art does not teach that, the control unit comprises: two capacitors coupled in series between one input terminal (12) and one of the connection nodes (15, 16), wherein the divider node (82,83) between the two capacitors (42,43;40,41) is coupled via a resistor (78;77) to a logic circuit; the logic circuit being designed to provide a signal which turns on the corresponding switch connected to said connection node (15;16) when the voltage in the divider node (82;83) falls within a predetermined voltage range.

The remaining dependent claims 4-8, 11-12 are allowable for at least above reason.

#### ***Citation of relevant prior art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Deng et al (U.S. Patent No. 6,008,589) discloses a single switch, high power factor.

Prior art Kamoi et al (U.S. Patent No. 6,437,515) discloses a discharge lamp lighting device of high startability of high pulse voltage.

Prior art Aendekerk (U.S. Patent No. 6,332,961) discloses a circuit arrangement.

Prior art Murakami et al (U.S. Patent No. 6,118,224) discloses a discharge lamp lighting device.

#### ***Inquiry***



Application/Control Number:  
10/542,908  
Art Unit: 2821

Page 8

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Dieu A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 AM-2: 45 PM).

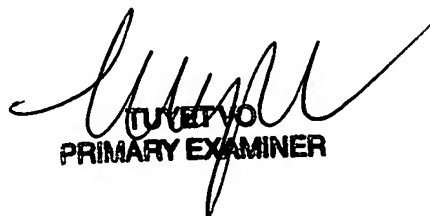
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Owens Douglas W can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

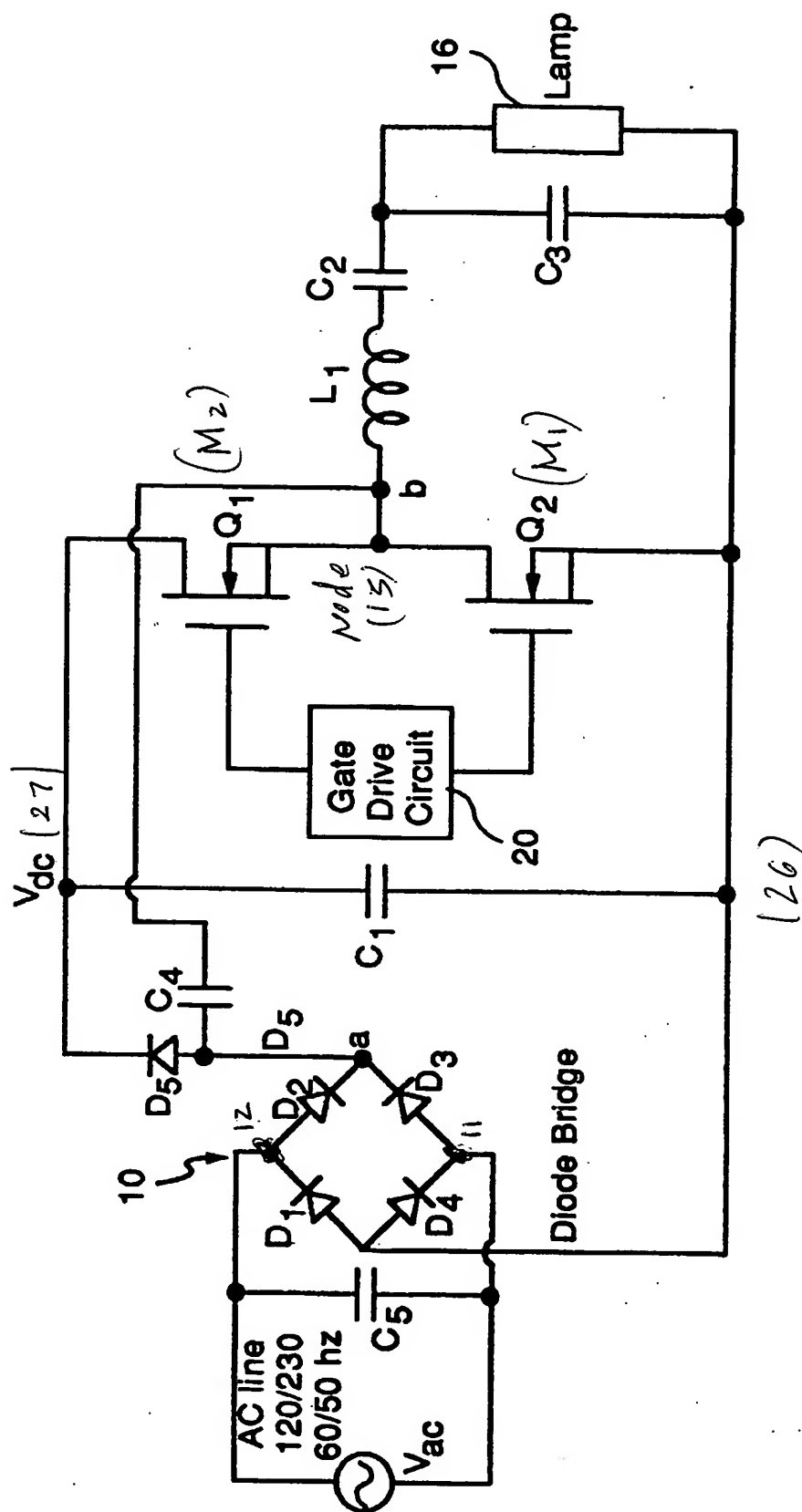
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner Minh A

Art Unit 2821

Date 9/25/07

  
TUYET VO  
PRIMARY EXAMINER



**FIG. 2**